

Power Contracts

Specified and Unspecified Sources

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Unspecified Sources:

Power Contracts – Market Context

- Outside of California, western power markets are bilateral rather than centralized.
- Power contracts are negotiated as to price, duration, delivery points, sources and other terms
- Power sellers include utilities, independent power plant owners, the federal government and marketers
- Scope of the market includes all or part of 13 western states and 3 Canadian provinces

Unspecified Sources:

Power Contracts – Forms of Transactions

- Example: Western System Power Pool (WSPP) standard contracts (>250 members)
 - Physical sales – economy (Schedule A) (source unspecified)
 - Physical sales – unit contingent (Schedule B)
 - Physical sales – system (Schedule C) (source unspecified)
- BPA sales are generally system sales from unspecified source
- Physical delivery may be point-to-point or network transmission
- Other types of transactions
 - Exchanges (diurnal or seasonal)
 - Capacity sales (simple or capacity/energy)
 - Integration/Displacement (e.g. wind integration)
 - Reserves
 - Non-physical, financial transactions/hedges

Unspecified Sources:

Power Contracts – Current Market Conditions

- Washington IOUs use power purchase contracts, but most are short-term (< 5 years)
 - PSE has no “system” purchases for over 5 year term [some for about 4 years from marketers]
 - PacifiCorp has no “system” purchases for over a 5-year term.
 - Avista contracts > 5 years are about 3 percent of its total power resources. 90 percent of this is a system (unspecified source) transaction with BPA – the WNP-3 exchange.
- Contracts > 5 years (unit or system) are rare in the current market.
 - WSPP data (IOUs only) (not yet available, may have by 10/23)
- BPA power sales to preference customers will be > 5 years
 - Tier 1 sales from federal based system (FBS): mix of resources and some contracts - sources cannot be specified.
 - Tier 2 sales from new specified resources or unspecified sources.

Unspecified Sources:

Power Contracts – How Does CPUC Address?

- SB 1368 requires EPS for “long-term financial commitments”
 - Unspecified sources language similar to ESSB 6001
- For unit contingent contracts > 5 years – facility-based application of the EPS
 - “look at the characteristics and emissions of each individual power plant being contracted for, not just the characteristics of the contracted-for deliveries or the blended combination of multiple facilities and resources.” Decision 07-01-039 1/25/07 page 10.
- Contracts with unspecified sources
 - Defined as “contracts (power purchase agreements) that are not linked to any particular generating source.”
 - Rejected imputation of emissions rates to unspecified contracts as “not consistent with the requirements of SB 1368.” Id. pp.11-12
 - Proxies do not reflect the actual emissions of the underlying resources
 - Imputation results in a “binary . . . ‘pass’ or ‘fail’ based on the selected level of imputed emissions”
 - None of the imputation approaches proposed are “reasonable or workable. . . at this time.”

Unspecified Sources:

Power Contracts – How Does CPUC Address? (cont)

- Contracts with unspecified sources (cont)
 - CPUC requires that “All covered procurements be with specified resources . . . except when substitute system energy is purchased to firm deliveries from specified power plants under limited conditions”
Id. pp. 13-16
 - The contract specifies power delivered exclusively from pre-approved renewable technologies and there are assurances of such in the contract.
 - Each of a group of specified baseload plants passes the EPS and the contract includes such assurances. (burden on the utility to document)
 - Substitute system energy is 15 percent or less of the forecast deliveries over the term of the contract and
 - Contract allows system energy as a substitute if: forced outage, scheduled maintenance, or temporary unavailability.
 - Contract allows system energy as a substitute to meet operating conditions such as ramp-rates, start-ups, minimum operating hours.
 - Substitute energy may not exceed the output of an intermittent resource (solar, wind, run-of-the-river). (note: implies plant factor of 50 percent)

Unspecified Sources:

Power Contracts – How Does CPUC Address? (cont.)

- Contracts with unspecified sources (cont.)
 - CPUC observes that when a program exists to track the GHG emissions of all power plants (in the west), marketers and other sellers of unspecified resources will be able to assign a reasonable and accurate GHG profile to their contracts. According to CPUC, this should be the goal.
- CPUC recommendation to Air Resources Board on Reporting and Verification Protocol for Green House Gas Emissions. Decision 07-09-017, 9/16/07, pp 40-43.
 - CPUC rejected separate emission factors for CAISO and various western regions.
 - CPUC recommends using a single default emissions factor (1,100 lbs/MWH) for reporting the emissions from unspecified resources.
 - NOTE: This is not an emissions performance standard, this is the factor to apply when utilities report the unspecified resources that comply with the emissions performance standard.

Unspecified Sources:

Power Contracts – Options for WA

- Impute an emissions factor. But which one, based on what?
 - WECC average?, NWPP average?, WA average?
- Follow California – outlaw contracts with unspecified sources except under limited conditions.
 - Differences between California and Washington
 - Washington's regulation must accommodate the 50 percent or more of power supply delivered under long-term BPA contracts that do not (cannot) specify individual power plants or contract sources.
 - Pre-approved renewable technologies does not apply in WA – UTC does not pre-approve technologies or contracts.
 - WA's power system is more dependant on variable hydropower than is California's. System contracts may be important to hedge hydropower risk.
 - WA relies on seasonal exchanges – not clear how CPUC handled these.
 - Wind plants in the PNW have plant factors around 33 percent; substitute (integration) energy limit needs to be up to 2x plant output.

Unspecified Sources:

Power Contracts – Options for WA (cont.)

- UTC and Governing Boards allow unspecified contracts only if:
 - Utility bears the burden to certify that the emissions profile of an unspecified contract satisfies the EPS based on a generic set of emission factors and methodology/procedures specified by the department.
 - Is risk of rate disallowance or audit exception adequate?
 - Is there a reference source for generic emission factors?
 - How might these generic factors be applied to a mix of generation types?
- Other?